



- SAW Filter for Digital Television
- Complies with Directive 2002/95/EC (RoHS)

Characteristics :

Balance-to-Balanced Operation

Terminating Source/Load Impedance : $Z_S = 150 \Omega$

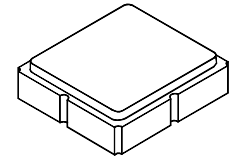


SF2169E

**1790.48 MHz
SAW Filter**

Maximum Rating

Rating	Value	Units
Input Power Level	0	dBm
DC Voltage on any Non-ground Terminal	3	V
Operating Temperature Range	-40 to +85	°C
Storage Temperature Range in Tape and Reel	-40 to +85	°C
Maximum Soldering Profile, 5 cycles/ 10 seconds maximum	265	°C



SM3030-8

Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	f_C			1790.48		MHz
Maximum Insertion Loss, 1770.48 to 1810.48 MHz	IL_{MAX}			4.5	5.5	dB
1.5 dB Passband				61		MHz
Amplitude Ripple, 1770.48 to 1810.48 MHz				1.0	1.8	dB
Attenuation, Referenced to IL_{MAX}						
50 to 1708.42 MHz			40	45		dB
1872.54 to 1900 MHz			37	50		
1900 to 2000 MHz			44	48		
2000 to 6000 MHz			20	30		
Group Delay Ripple, 1770.48 to 1810.48 MHz				5	20	ns _{P-P}

Case Style	SM3030-8 3.0 x 3.0 mm Nominal Footprint					
Lid Symbolization (Y=year, WW=week, S=shift) dot=pin 1 indicator	856, YWWS					
Standard Reel Quantity	Reel Size 7 Inch	500 Pieces/Reel				
	Reel Size 13 Inch	3000 Pieces/Reel				

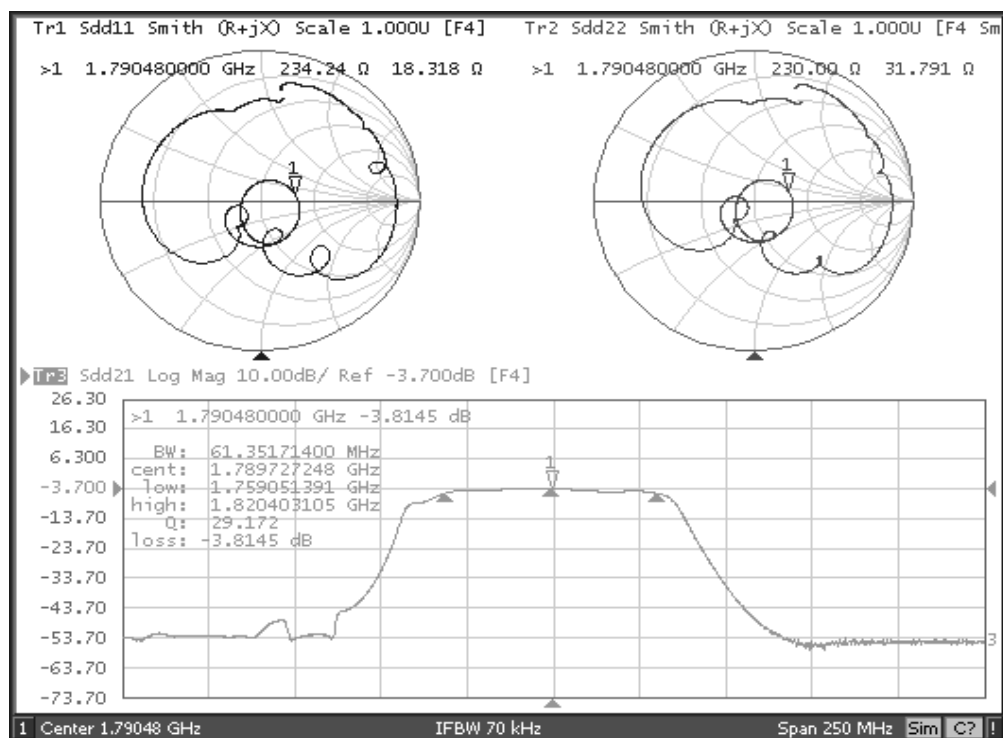


CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

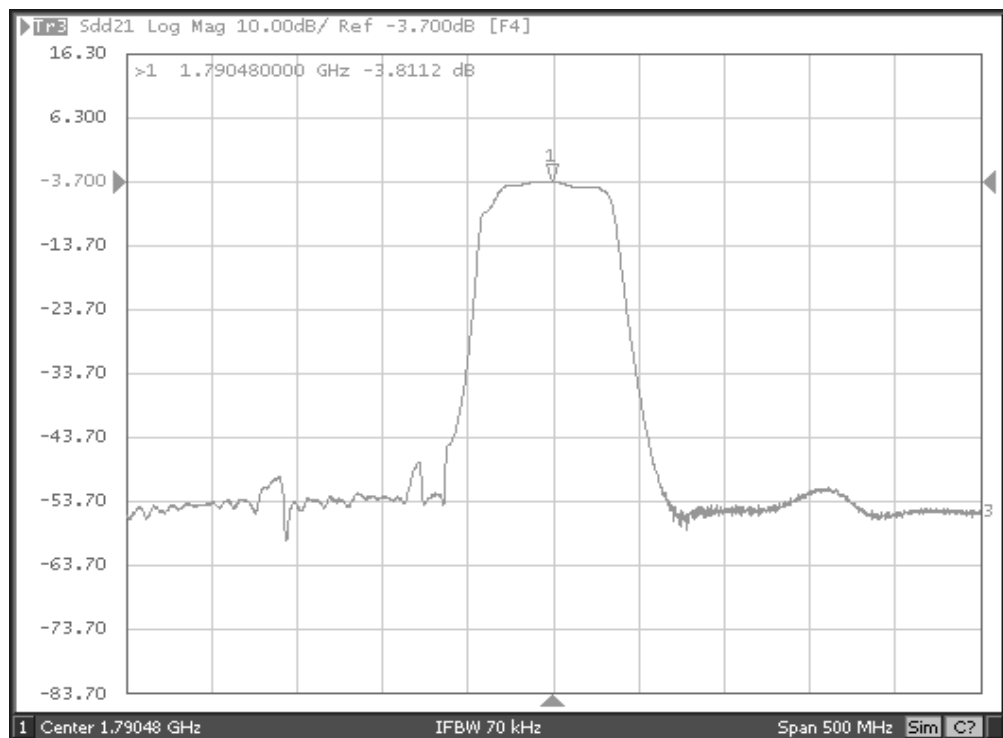
Notes:

1. US and international patents may apply.
2. RFM, stylized RFM logo, and RF Monolithics, Inc. are registered trademarks of RF Monolithics, Inc.

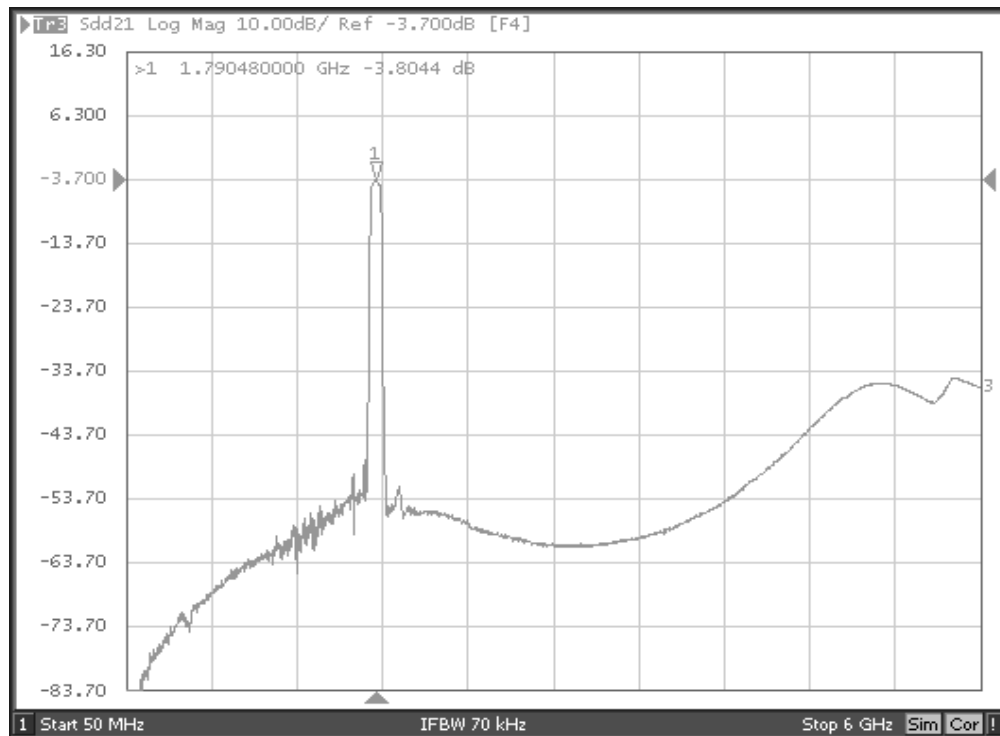
Filter S_{11} , S_{22} and S_{21} Plots



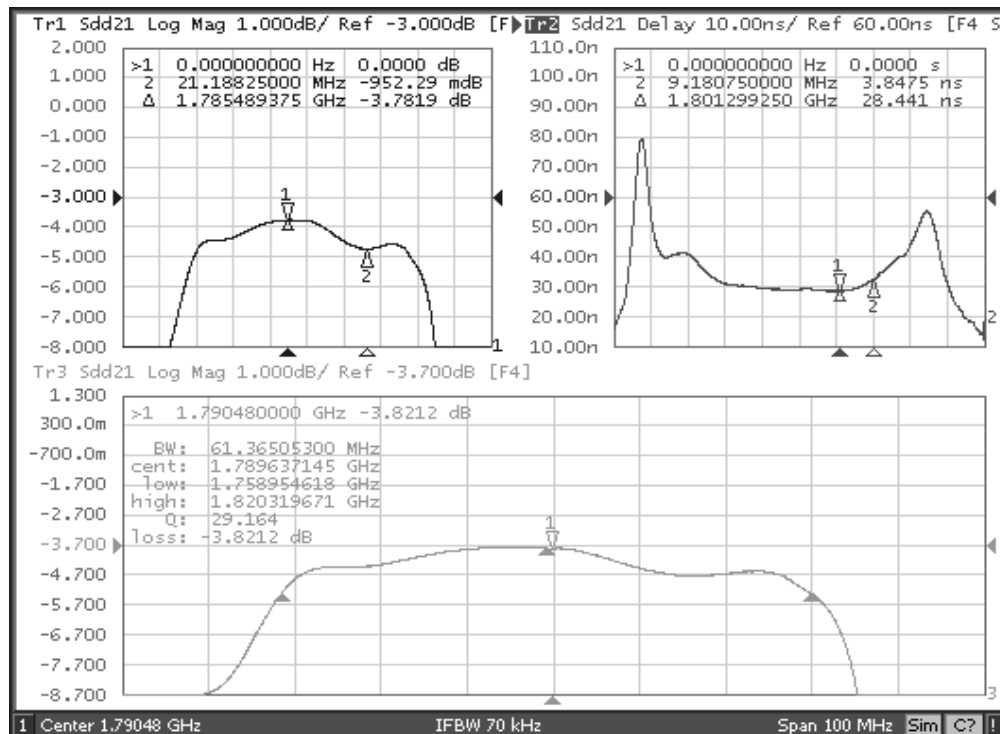
Filter Near-in Rejection



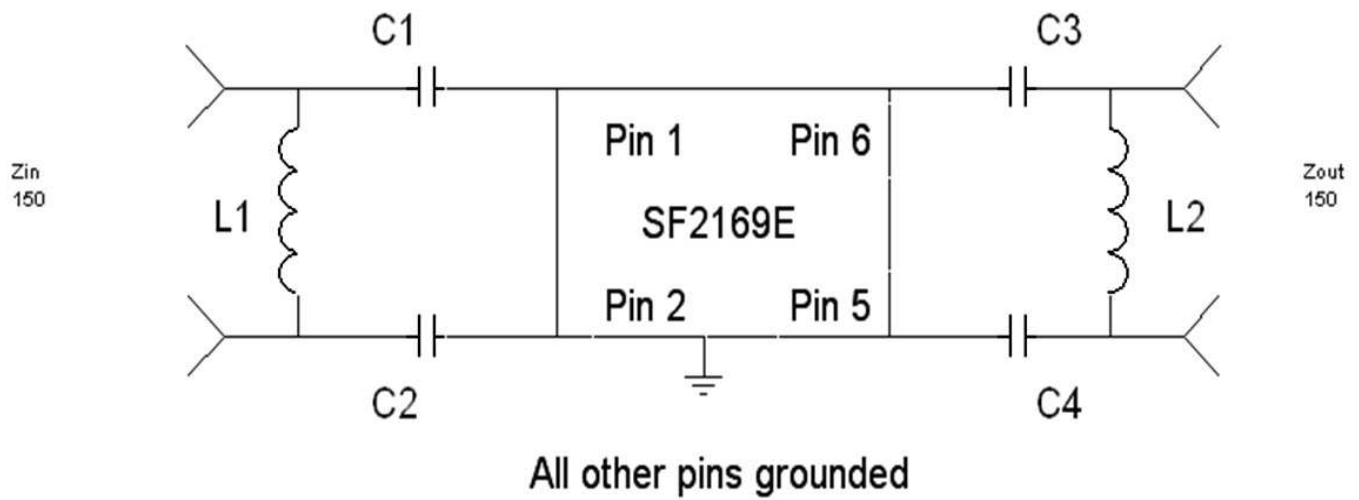
Filter Broadband Rejection



Filter Passband Amplitude and Group Delay Detail

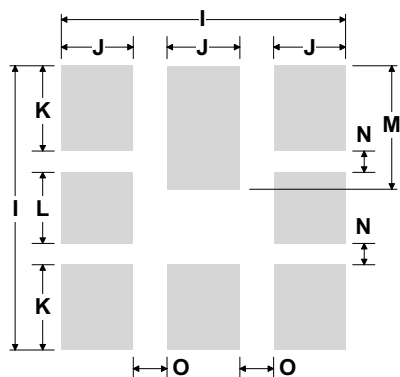
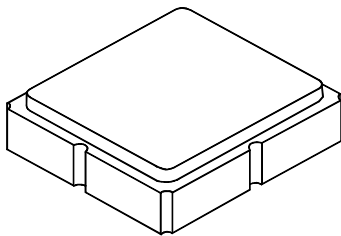


Tuning Network, 150 ohm Balanced Source/Load



L1, L2	10 nH
C1, C2, C3, C4	10 pF

8-Terminal Ceramic Surface-Mount Case 3.0 X 3.0 mm Nominal Footprint



PCB Footprint Top View

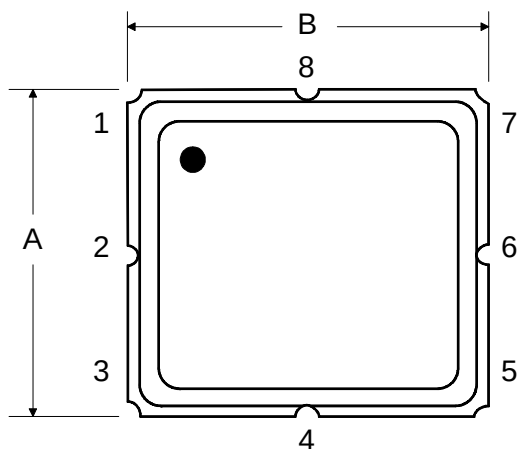
Case and PCB Footprint Dimensions

Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	2.87	3.0	3.13	0.113	0.118	0.123
B	2.87	3.0	3.13	0.113	0.118	0.123
C	1.14	1.27	1.40	0.045	0.050	0.055
D	0.79	0.92	1.05	0.031	0.036	0.041
E	0.62	0.75	0.88	0.024	0.029	0.034
F	0.47	0.60	0.73	0.018	0.024	0.029
G	0.47	0.60	0.73	0.018	0.024	0.029
H	1.07	1.20	1.33	0.042	0.047	0.052
I		3.19			0.126	
J		0.81			0.032	
K		0.96			0.038	
L		0.81			0.032	
M		1.39			0.055	
N		0.23			0.009	
O		0.38			0.015	

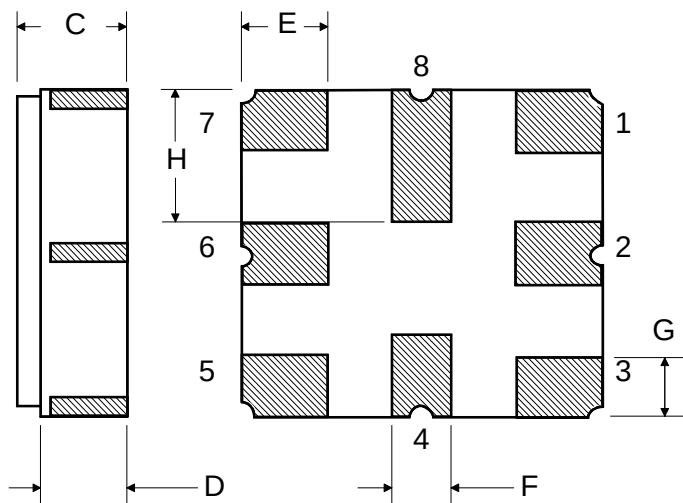
Case Materials

Materials	
Solder Pad Plating	0.3 to 1.0 μm Gold over 1.27 to 8.89 μm Nickel
Lid Plating	2.0 to 3.0 μm Nickel
Body	Al_2O_3 Ceramic
Pb Free	

TOP VIEW



BOTTOM VIEW



Technical drawing of a circular part, likely a flange or a base plate, showing three views: a top view, a side view, and a detail view.

Top View: A large circle with a smaller concentric circle in the center. A crosshair (dashed lines) is centered on the part. A leader line points from the text "See Detail 'A'" to the center of the inner circle.

Side View: A vertical cross-section showing the thickness of the part. The total thickness is dimensioned as 12.0. The inner hole has a diameter of 100 REF. The outer diameter is dimensioned as "B" REF.

Detail View (Detail A): A close-up of the central hole. It shows a circular hole with a diameter of 13.0. The hole is surrounded by a flange with a thickness of 2.0. The outer diameter of the flange is dimensioned as 20.2.

"B"		Quantity Per Reel
Inches	millimeters	
7	178	500
13	330	3000

Carrier Tape Dimensions	
Ao	3.35 mm
Bo	3.35 mm
Ko	1.4 mm
Pitch	8.0 mm
W	12.0 mm

0.3 ± 0.05

RO.3 (MAX.)

PIN #1

2.0

4.0

Ø1.50

A

1.75

5.5

12.0

B₀

B

B

A₀

Pitch

A

R0.5 (MAX.)

Ø1.5

SECTION A-A

SECTION B-B

USER DIRECTION OF FEED